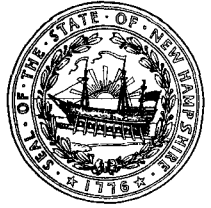




The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

Mr. Richard Hartung, Chairman
Town of Hampstead
11 Main Street
Hampstead, NH 03841

April 20, 2006
Letter of Deficiency
DSP#06-013

RE: Wash Pond Outlet (Shop) Dam #104.02, Hampstead

Dear Chairman Hartung:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 302.02, an inspection of the subject dam was conducted on October 24, 2005. During this visual inspection and/or file review, the following deficiencies were observed:

1. There is brush and trees located on the upstream and downstream faces of the dam and within 15' of the downstream toe of the dam;
2. The downstream embankment of the dam exhibited wet soils and some seepage at the downstream toe of the right embankment. Further investigation is needed following tree removal;
3. The concrete on the upstream and downstream faces of the outlet shows signs of cracking and deterioration;
4. There is no operation and maintenance plan (O&M) on file with the DES;
5. Due to potential flooding and major economic damage to properties downstream of the dam in the event of a dam breach the hazard classification has been upgraded from non-menace, class AA, to significant hazard, class B; and
6. With the upgraded hazard classification an Emergency Action Plan (EAP) will be needed.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

August 30, 2006:

1. Remove brush and trees located on the upstream and downstream faces of the dam and within 15' of the downstream toe of the dam;
2. Notify this office when tree clearing has been completed so that a more detailed inspection of the downstream embankment of the dam can occur;
3. Complete an O&M plan. Designate a dam monitor who will be available within 2 hours, at all times, in case of a flooding emergency. Refer to the enclosed guidelines;

4. Complete a draft EAP. For assistance in preparing and completing this document please contact Bethann McCarthy, P.E., our EAP Coordinator, at 603-271-3406 or email her at bmccarthy@des.state.nh.us; and

December 31, 2006:

5. Repair the concrete on the upstream and downstream faces of the outlet that is showing signs of cracking and deterioration.

The reasoning behind the upgrade in hazard classification of the dam is as follows:

Downstream of the dam the discharge flows through Sanborn Shore Campground, a privately owned campground with some permanent residents. Approximately 300 feet downstream the flow begins to pass through a residential mobile home neighborhood via an open channel and crosses two campground access roads through 2- 42" CMP culverts with inverts 4.5' below the top of the gravel roads. Mobile homes line the open channel that spans between the two road crossings. Door sills in these mobile homes appear to be approximately 2.5 feet above ground elevation. Further downstream the discharge enters Island Pond.

Using a simplified dam break analysis the peak flow from the Shop Pond would be 1913 cfs. Since the capacity of the downstream road culvert was calculated to be 62 cfs, a flow of this magnitude could cause a maximum of 6 feet of flooding in the campground. Backwater effects at the entrance to the road culvert would also add to the flooding situation. Due to the potential for significant downstream property damage and flooding in the event of a dam breach, the hazard classification of "B" is justified for this structure.

A significant hazard dam, Class B, is inspected by this office once every 4 years. The dam owner will be assessed an annual dam registration fee of \$300.00. The EAP, once completed, must be reviewed annually and tested once every 4 years.


DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

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Dam #104.02/DSP#06-013
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If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-1971, email me at glevergood@des.state.nh.us, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely,


Grace E. Levergood, P.E.
Dam Safety Engineer

Attachments Guideline for an O&M plan, DB8, DB13
cc: Gretchen R. Hamel, Legal Unit Administrator ✓
Bethann McCarthy, P.E., EAP Coordinator
Jon Worthen, Road Agent, Town of Hampstead
Certified # 7600 1670 0000 0588 7124
GEL/was/h:/safety/wendy/lod/104-02lod.doc